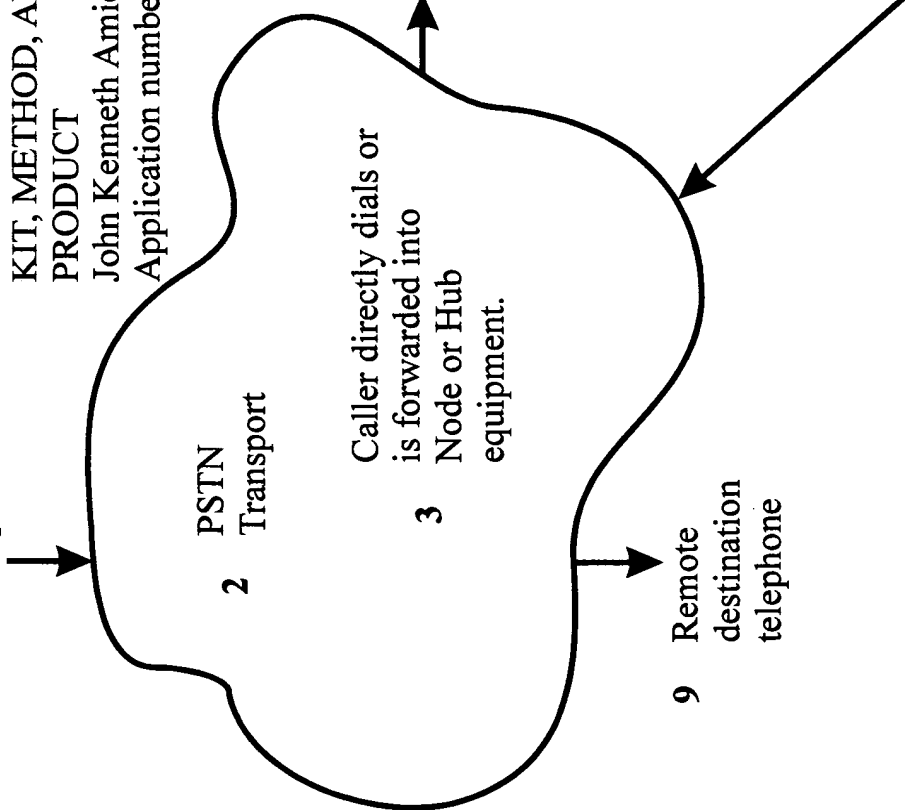Fig., page 1 of 64 A VIRTUAL
VOICE/COMPANY/OFFICE NETWORK TOOL
KIT, METHOD, AND COMPUTER PROGRAM
PRODUCT
John Kenneth Amick
Application number 09/556,439.

1 Calling party
source telephone

2 PSTN
Transport

3 Caller directly dials or
is forwarded into
Node or Hub
equipment.

9 Remote
destination
telephone

4 Virtual network call processing system Node or HUB.

5 Handling and routing information from the network or Node
switch instructs the Node equipment to start the desired virtual
network call processing system application.

6 Appropriate greeting is played to the caller.

7 Caller may send, receive or manipulate a mixed-media
message.

8 Caller takes an action resulting in an out dial. In the absence
of an error condition the call is processed to a remote
destination telephone. During an error condition the error
handling mechanism processes the call to a virtual network call
processing system application comprising at least one software
application comprising at least one object / software construct.
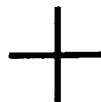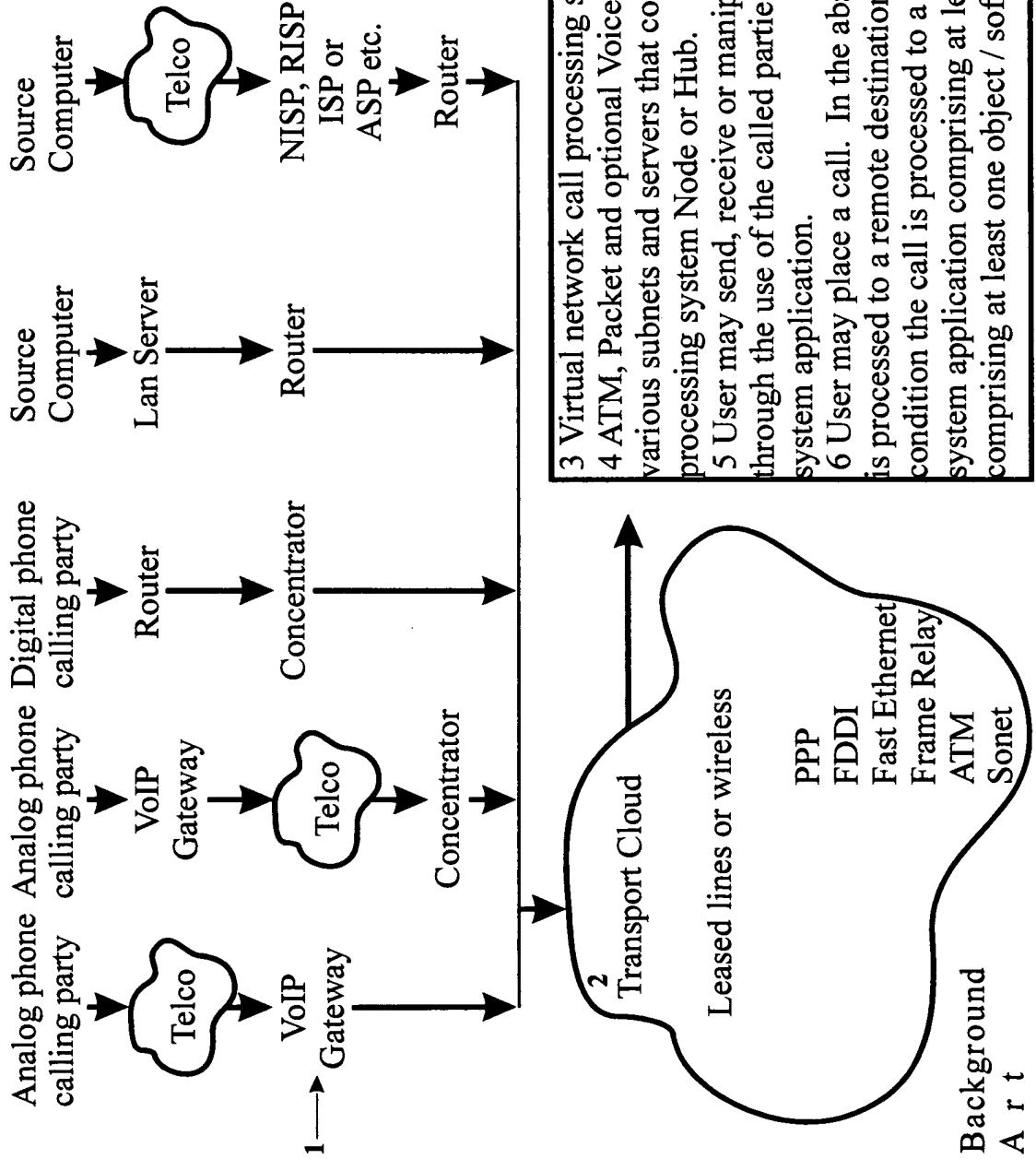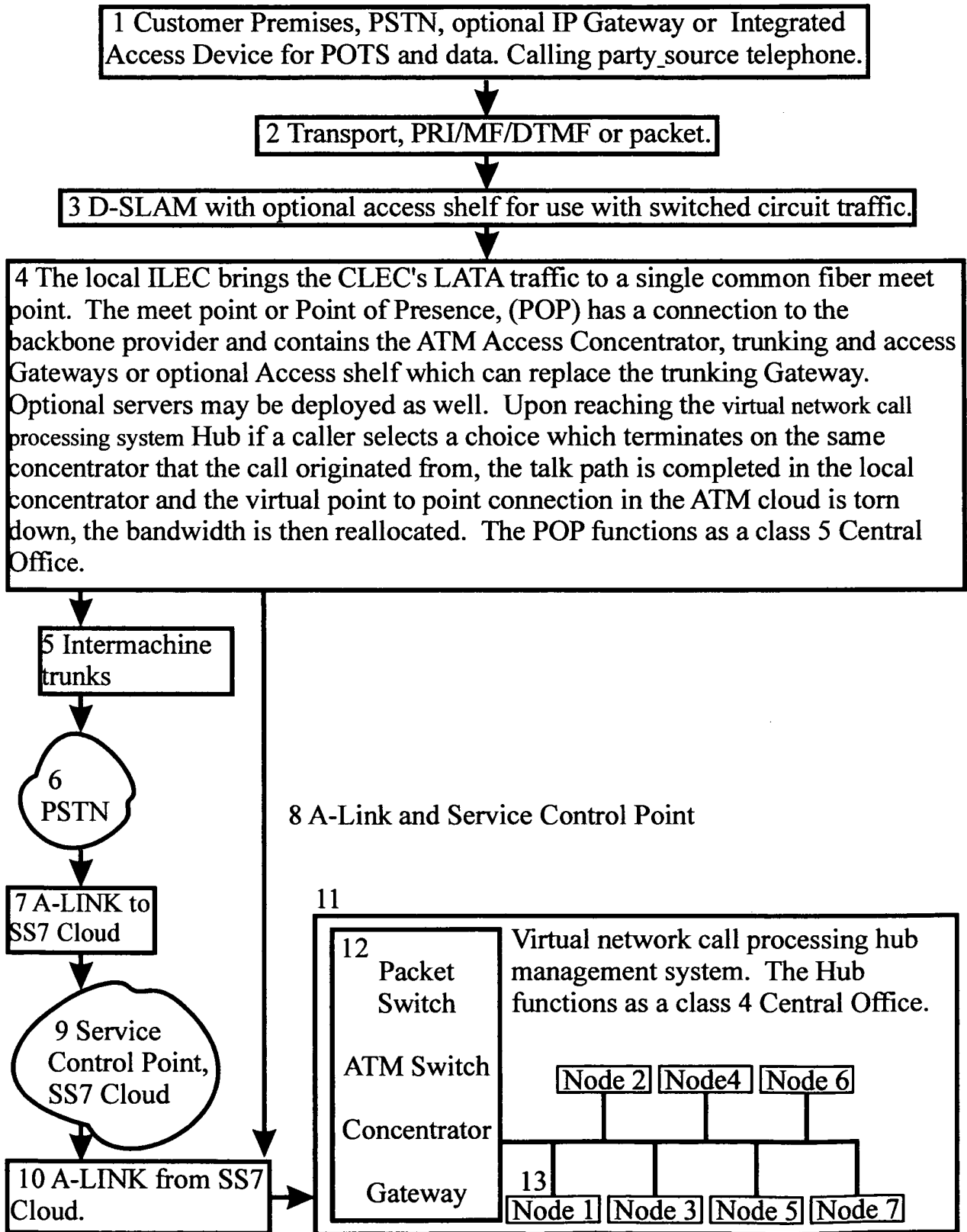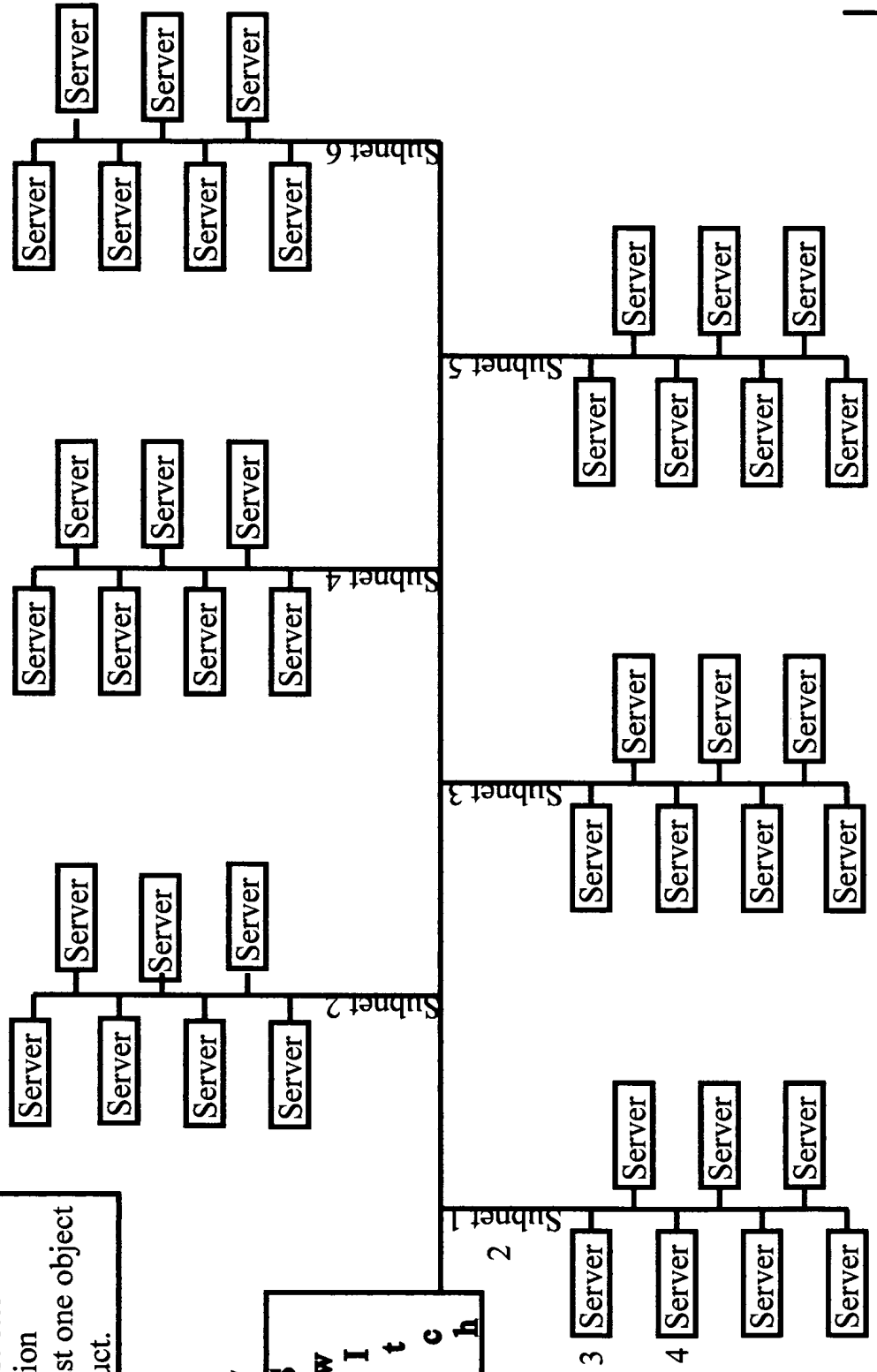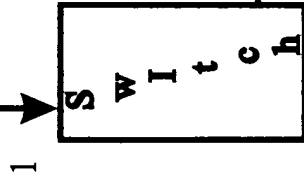
Background
Art

Fig., page 2 of 64 A VIRTUAL
VOICE/COMPANY/OFFICE NETWORK TOOL KIT,
METHOD, AND COMPUTER PROGRAM PRODUCT
John Kenneth Amick
Application number 09/556,439.

Analog phone   Analog phone   Digital phone   Source   Source
calling party calling party calling party   Computer   Computer

Telco   VoIP   Router   Lan Server   Telco
               Gateway   Source
                                                           Computer

1 ──→ VoIP   Telco   Concentrator   Router   NISP, RISP
       Gateway   ISP or
               Concentrator   ASP etc.

               Concentrator   Router

2
Transport Cloud

Leased lines or wireless

          PPP
          FDDI
          Fast Ethernet
          Frame Relay
          ATM
          Sonet

Background
A r t

3 Virtual network call processing system Hub site.
4 ATM, Packet and optional Voice Switch, Gateways, Concentrators,
various subnets and servers that comprise a virtual network call
processing system Node or Hub.
5 User may send, receive or manipulate a mixed-media message
through the use of the called parties Virtual network call processing
system application.
6 User may place a call. In the absence of an error condition the call
is processed to a remote destination telephone. During an error
condition the call is processed to a Virtual network call processing
system application comprising at least one software application
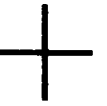comprising at least one object / software construct.

John Kenneth Amick
Application number 09/556,43.

1 Customer Premises, PSTN, optional IP Gateway or Integrated Access Device for POTS and data. Calling party_source telephone.

2 Transport, PRI/MF/DTMF or packet.

3 D-SLAM with optional access shelf for use with switched circuit traffic.

4 The local ILEC brings the CLEC's LATA traffic to a single common fiber meet point. The meet point or Point of Presence, (POP) has a connection to the backbone provider and contains the ATM Access Concentrator, trunking and access Gateways or optional Access shelf which can replace the trunking Gateway. Optional servers may be deployed as well. Upon reaching the virtual network call processing system Hub if a caller selects a choice which terminates on the same concentrator that the call originated from, the talk path is completed in the local concentrator and the virtual point to point connection in the ATM cloud is torn down, the bandwidth is then reallocated. The POP functions as a class 5 Central Office.

5 Intermachine trunks

6 PSTN

8 A-Link and Service Control Point

7 A-LINK to SS7 Cloud

11

12 Packet Switch

ATM Switch

Concentrator

Gateway

9 Service Control Point, SS7 Cloud

Virtual network call processing hub management system. The Hub functions as a class 4 Central Office.

Node 2 Node4 Node 6

13
Node 1 Node 3 Node 5 Node 7
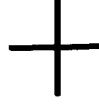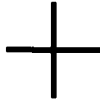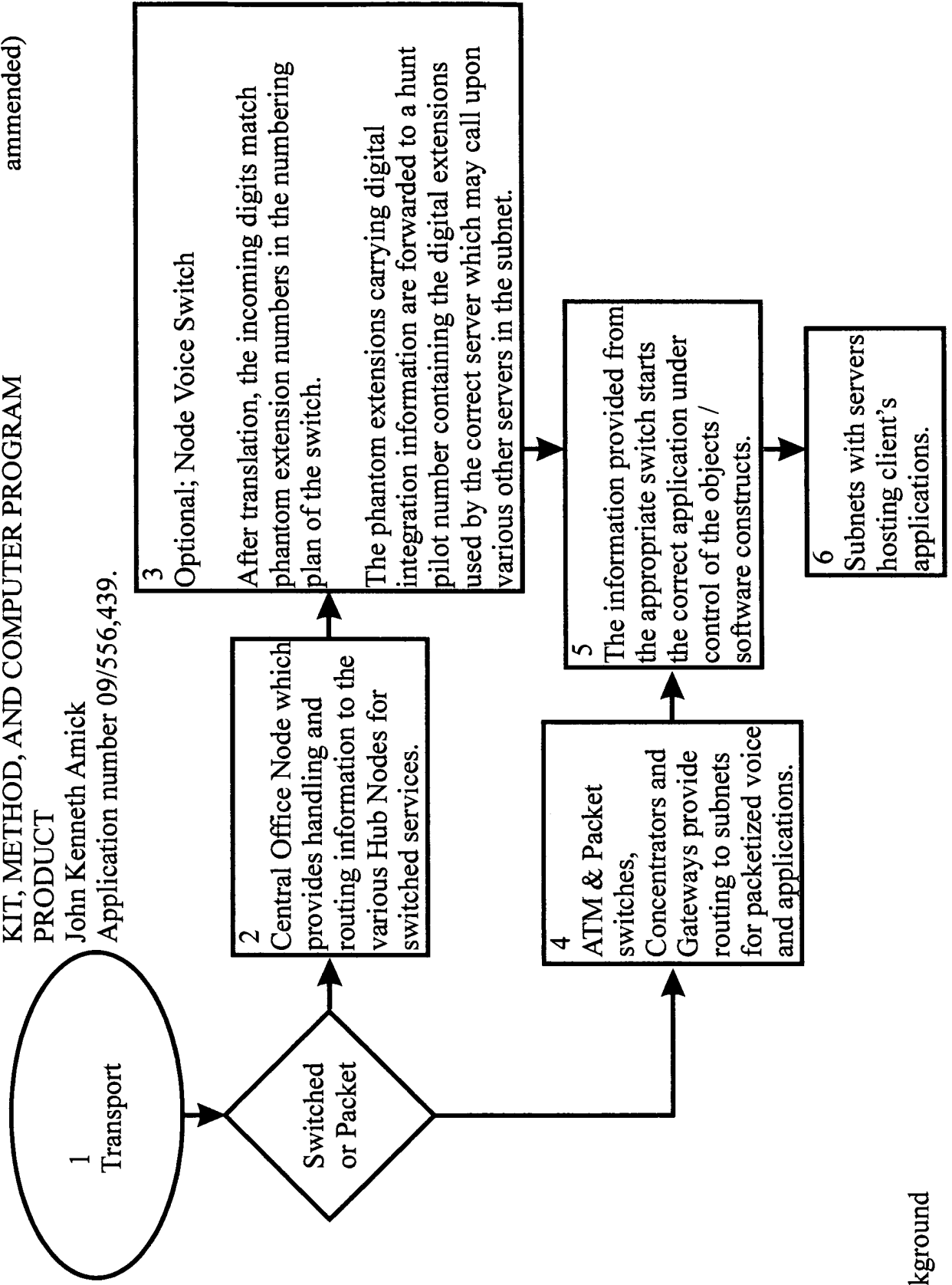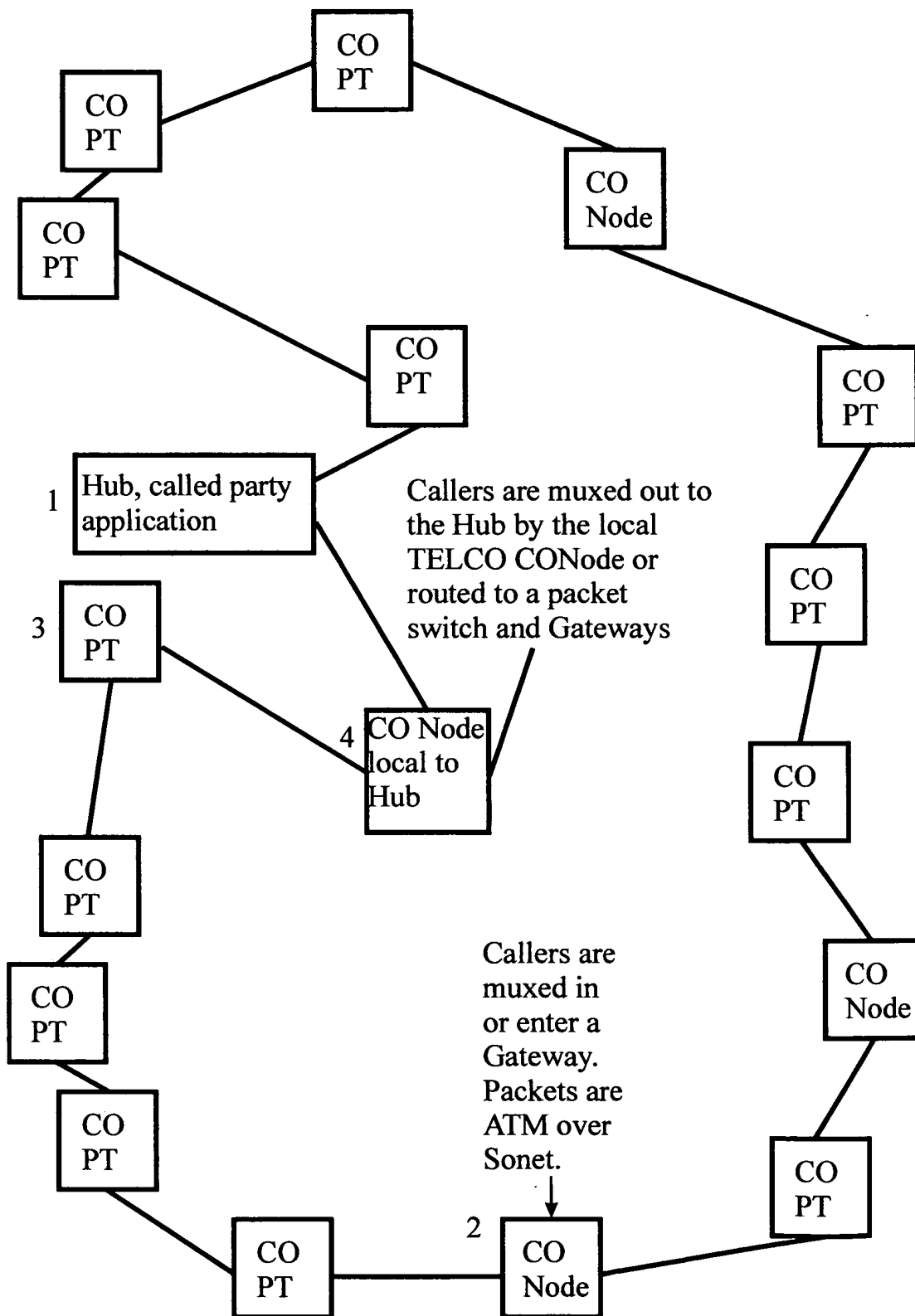
10 A-LINK from SS7 Cloud.

Background Art

Fig., page 4 of 64 A VIRTUAL
VOICE/COMPANY/OFFICE NETWORK
TOOL KIT, METHOD, AND COMPUTER
PROGRAM PRODUCT
John Kenneth Amick
Application number 09/556,439.

Handling and routing
information from the network
or Node switch instructs the
Node equipment to start the
desired virtual network call
processing system application
comprising at least one
software application
comprising at least one object
/ software construct.

Switch

1

2

3

4

Subnet 1

Subnet 2

Subnet 3

Subnet 4

Subnet 5

Subnet 6

Server
Server
Server
Server
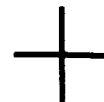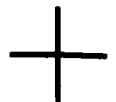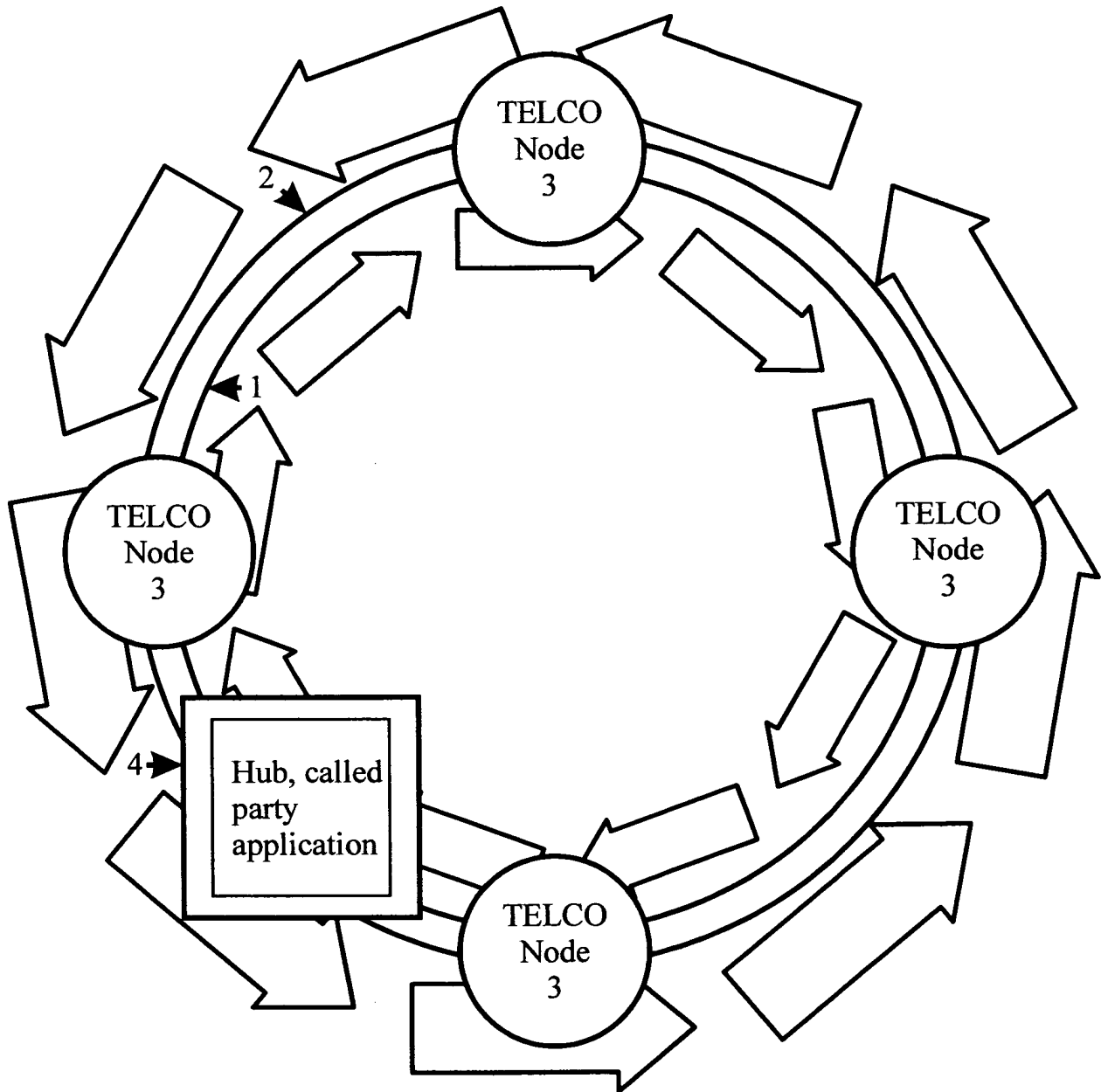Server
Server
Server

Background
Art

Fig., page 5 of 64 A VIRTUAL
VOICE/COMPANY/OFFICE NETWORK TOOL
KIT, METHOD, AND COMPUTER PROGRAM
PRODUCT
John Kenneth Amick
Application number 09/556,439.

1
Transport

Switched or Packet

2
Central Office Node which provides handling and routing information to the various Hub Nodes for switched services.

3
Optional; Node Voice Switch

After translation, the incoming digits match phantom extension numbers in the numbering plan of the switch.

The phantom extensions carrying digital integration information are forwarded to a hunt pilot number containing the digital extensions used by the correct server which may call upon various other servers in the subnet.

4
ATM & Packet switches, Concentrators and Gateways provide routing to subnets for packetized voice and applications.

5
The information provided from the appropriate switch starts the correct application under control of the objects / software constructs.

6
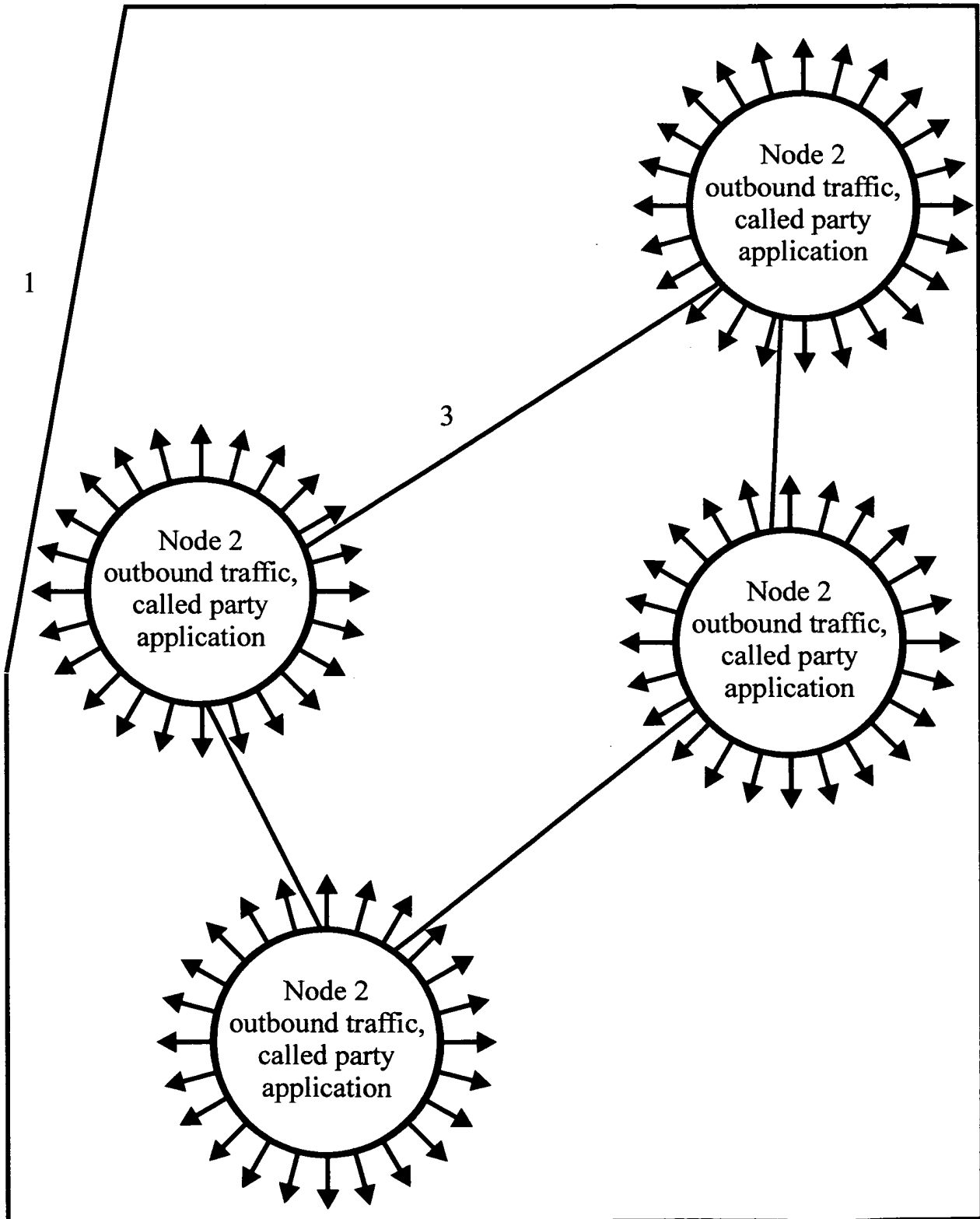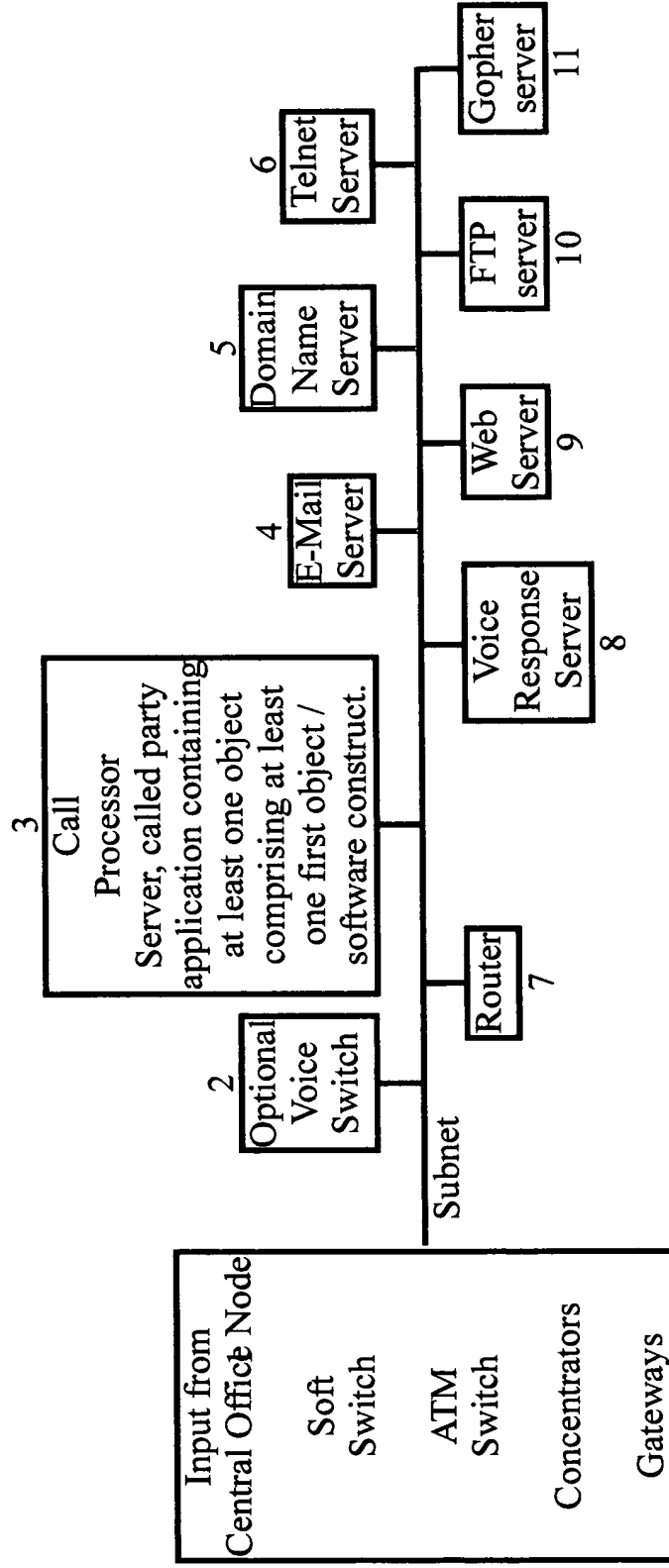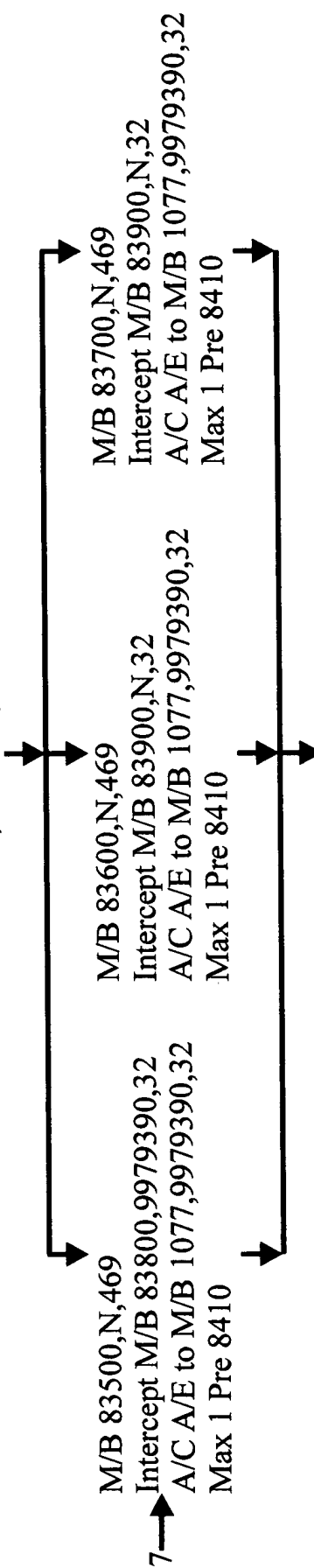Subnets with servers hosting client's applications.

Background
Art

Fig., Page 6 of 64 A VIRTUAL VOICE/COMPANY/OFFICE NETWORK TOOL KIT, METHOD, AND COMPUTER PROGRAM PRODUCT John Kenneth Amick Application number 09/556,439.

Replacement ~~sheet~~
(Currently amended)

CO PT

CO PT

CO PT

CO Node

CO PT

CO PT

1 Hub, called party application

Callers are muxed out to the Hub by the local TELCO CONode or routed to a packet switch and Gateways

3 CO PT

CO PT

CO PT

4 CO Node local to Hub

CO PT

CO PT

CO Node

Callers are muxed in or enter a Gateway. Packets are ATM over Sonet.

2 CO Node

CO PT

CO PT

Background Art

Replacement
~~sheet~~
(Currently
amended)

TELCO
Node
3

2

1

TELCO
Node
3

TELCO
Node
3

Hub, called
party
application

4

TELCO
Node
3

Background Art

1

3

Node 2 outbound traffic, called party application

Node 2 outbound traffic, called party application

Node 2 outbound traffic, called party application

Node 2 outbound traffic, called party application

Background Art

Fig., Page 9 of 64 A VIRTUAL
VOICE/COMPANY/OFFICE NETWORK TOOL KIT,
METHOD, AND COMPUTER PROGRAM PRODUCT
John Kenneth Amick
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Background
Art

Fig., Page 10 of 64 A VIRTUAL VOICE/COMPANY/OFFICE
NETWORK TOOL KIT, METHOD, AND COMPUTER
PROGRAM PRODUCT John Kenneth Amick
Application number 09/556,439.

XYZ Company
Contact-Name of person
Telephone (XXX) XXX-XXXX
Fax (XXX) XXX-XXXX
Street address
Suite X
City, State, Zip

Object / Software Construct-Use Example

1 (XXX) XXX-XXXX
2 M/B 2004,N,468 silent greeting
3 -MTWTF- 08:00-12:00 N/B 83500,N,1
   -MTWTF-12:01-12:59 N/B 83600,N,1
   -MTWTF-13:00-17:00 N/B 83500,N,1
   Default N/B 83700,N,1
4 Business hours Intercept M/B 83800,9979390,32
5 A/C A/E to M/B 1077,9979390,N,32
6 Lunch and Default Intercept M/B 83900,N,32
   A/C A/E to M/B 1077,9979390,32

M/B 83500,N,469
7 → Intercept M/B 83800,9979390,32
   A/C A/E to M/B 1077,9979390,32
   Max 1 Pre 8410

M/B 84101,N,469
Business hours intercept M/B 83800, 9979390,32
A/C A/E to M/B 1077,9979390,32
Lunch and Default intercept M/B 83900,N,32
A/C A/E to M/B 1077,9979390,32

M/B 83600,N,469
Intercept M/B 83900,N,32
A/C A/E to M/B 1077,9979390,32
Max 1 Pre 8410

M/B 83700,N,469
Intercept M/B 83900,N,32
A/C A/E to M/B 1077,9979390,32
Max 1 Pre 8410

Application located in NOCC 1
Default security code KUNIK or 58645
Voice Doreen Panico, User transfer on all trunks.
Call forward ring no answer on all trunks

FIG 10

Background
Art